



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,623	12/16/2003	Chan Wang Park	2336-225	2648

7590 11/21/2005

LOWE HAUPTMAN GOPSTEIN GILMAN & BERNER, LLP
Suite 310
1700 Diagonal Road
Alexandria, VA 22314

EXAMINER

VANNUCCI, JAMES

ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

612

Office Action Summary	Application No. 10/735,623	Applicant(s) PARK ET AL.	
	Examiner Jim Vannucci	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 6-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Epitoux et al.(6,864,553).

Claim 1, figure 7 discloses a luminous element for emitting a laser beam(col. 9, line 57), a frame unit having an upper section mounted with luminous element and functioning to radiate heat generated during creation of the laser beam(300; and col. 8, lines 53-55), a housing(210) having an internal space for receiving the frame unit and an exit hole communicating with the internal space for allowing the laser beam to pass through the same, and a PCB(col. 8, line 50) having a plurality of pattern electrodes formed on an upper face where the pattern electrodes are electrically connected with the luminous element(col. 8, lines 60-67).

Claim 3, the frame unit(300) is a metal plate with excellent heat conductivity.

Claim 13, the PCB(640) disclosed in figure 7 is a single sided PCB having a front face on which the pattern electrodes are formed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epitoux in view of Masui et al.(5,557,116).

Epitoux does not disclose the following elements

Claim 2, Masui discloses a photodiode which is die bonded to an upper section of a frame unit and a laser chip which is die bonded to an upper face of the photodiode(col. 11, lines 25-35).

Claim 4, figure 32 of Masui discloses a frame unit(152) that has a wing section(153 & 154) formed on both sides, and that is mounted within the internal space of a housing(157).

Claim 5, the housing(157) disclosed in figure 32 of Masui has holding grooves(158 & 159) formed axially in inner peripheral portions of the internal space of the housing, where the wing section includes wings(153 & 154) which are extended laterally from both lateral peripheral portions of the frame unit to be inserted into the holding grooves and fixed therein.

Claim 11, figure 7 of Epitau discloses pattern electrodes on a PCB(640) and figure 32 of Masui discloses connections with a luminous element(121) via wire members(155).

Claim 12, figure 7 of Epitau discloses pattern electrodes for a luminous element that extend to an upper peripheral portion of a PCB in close proximity to a luminous element and figure 32 of Masui discloses upper terminals in contact with lower ends of wire members.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the frame, housing geometry and die bonding disclosed in Masui with the device disclosed in Epitau for improved protection of the device as disclosed in Masui(col. 4, lines 40-67).

Allowable Subject Matter

5. Claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter. The following limitations are primarily responsible for distinguishing these claims over the prior art.

Regarding claim 6, the limitations concerning each of the holding grooves having fitting groove extended radially in a top portion thereof; regarding claims 7-8, the limitations concerning the wing section including arc-shaped wings which are elastically

Art Unit: 2828

contacted with inner peripheral portions of the internal space of the housing as recited in claim 7; and regarding claims 9-10, the limitations concerning the frame unit having arc-shaped protective wings formed at both lateral peripheral portions of the frame unit to surround and protect the luminous element as recited in claim 9.

Correspondence

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Vannucci whose phone number is (571) 272-1820.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (571) 273-8300.


James Vannucci